

REMARKS

In section 1 of the Office Action, the Examiner appears to contend that, while claims 37-51 read on Figure 2, claims 25-36 and 52-75 do not. Applicants disagree. An example of reading independent claims 25, 52, and 64 on Figure 2 is provided in the immediately following paragraphs having suggested reference numerals parenthetically inserted to show how these claims might be read on Figure 2 according to the example.

25. An RFID tag (16) comprising:
a first transceiver (32/34)
arranged to transmit and receive first
signals to and from a first reader
(12); and,
a second transceiver (38) arranged
to transmit and receive second signals
to and from a second reader (14).

52. An RFID tag (16) comprising:
a transceiver (32/34) arranged to
transmit and receive first signals to
and from a first reader (12); and,

a receiver (38) arranged to receive second signals from a second reader (14) and to activate the transceiver (32/34) thereby causing the transceiver (32/34) to transmit and receive the first signals to and from the first reader (12).

64. An RFID tag (16) comprising:

a transceiver (32/34) arranged to transmit and receive first signals to and from a first reader (12); and,

a receiver (38) arranged to receive second signals from a second reader (14) and to activate the transceiver (32/34) thereby causing the transceiver (32/34) to transmit and receive the first signals to and from the first reader (12), wherein the receiver (38) is incapable of receiving the first signals.

As can be seen from this example, independent claims 25, 52, and 64 can be read directly on Figure 2.

Therefore, if the basis of the restriction requirement is readability of a claim on Figure 2, all pending claims read on Figure 2 and should be examined by the Examiner.

Accordingly, the Examiner is respectfully requested to withdraw the restriction requirement.

In section 3 of the Office Action, the Examiner rejected claims 37-51 under the judicially created doctrine of double patenting as being unpatentable over the claims of U.S. Patent No. 6,726,099. In making this rejection, the Examiner compares claim 40 of the present application to claim 12 of the patent. However, the Examiner ignores the limitations of independent claim 37 is assessing the obviousness of claims 37-51 of the present application over claim 40 of the '099 patent.

That is, independent claim 37 adds to dependent claim 40 the additional limitations of duty cycling the receiver so that the receiver is turned on during ON times of duty cycles and so that the receiver is turned off during OFF times of the duty cycles, and receiving a frequency from a tag reader during the ON times of the receiver.

These additional limitations are not shown by the Examiner to be suggested by claim 12 or any other claim of the '099 patent and, therefore, the Examiner has

not shown that the claims of the present application are obvious over the claims of the '099 patent. Accordingly, claims 37-51 of the present application and the claims of the '099 patent do not claim the same invention and the double patenting rejection must fail.

In section 5 of the Office Action, the Examiner rejected claims 37-39 and 42-49 under 35 U.S.C. §102(b) as being anticipated by the Tuttle patent.

The Tuttle patent discloses in Figure 1A an enclosed transceiver 1 that includes a pair of batteries 2 and 3, a dipole antenna 4 and 5, and an integrated circuit 11. The batteries 2 and 3 supply power to the integrated circuit 11. The integrated circuit 11 of Figure 1A is a four terminal device that transmits and receives radio signals to and from an interrogator.

The integrated circuit 11 includes a wake-up circuit 12, a receiver 13, a transmitter 14, a control logic 15, and a memory 16. When a wake up signal having substantial in-band energy is received and detected by the wake-up circuit 12, the control logic 15 enables the receiver 13 to receive and decode a data signal on antenna 4 and 5. The control logic 15 writes the data from the decoded data signal into the memory 16. If a response is appropriate, the control logic 15 enables the

transmitter 14 to send response data as a second radio signal via the antenna 4 and 5.

Figure 1B shows an alternate enclosed transceiver 18. The enclosed transceiver 18 includes a loop antenna 19, a battery 20, and an integrated circuit 21. The battery 20 is connected to an antenna line 22. The integrated circuit 21 of Figure 1B is a three terminal device providing the same functions as the integrated circuit 11.

The interrogator sends an interrogation signal to the enclosed transceiver 1 or 18. The interrogation signal is received by antenna 4 and 5 and is first processed by the wake-up circuit 12. The wake-up circuit 12 brings the integrated circuit 11 out of its sleep mode into a waked mode in which the receiver 13 receives and decodes the interrogation signal to provide received data to the control logic 15. With the integrated circuit 11 now in the waked mode, the memory 16 is read by the control logic 15 to call-up transmit data. The control logic 15 couples the transmit data to the transmitter 14 in order to send the transmit data to the interrogator.

Independent claim 37 is directed to a method of conserving battery power in an RFID tag having a battery, a receiver, and a transmitter. According to the method,

the receiver is duty cycled so that the receiver is turned on during ON times of duty cycles and so that the receiver is turned off during OFF times of the duty cycles. During the ON times of the receiver, a frequency is received from a tag reader. Data is transmitted to the reader at the frequency.

The Tuttle patent does not anticipate independent claim 37 for at least two reasons.

First, independent claim 37 recites that a frequency is received by the RFID tag from a tag reader and that data is transmitted by the RFID tag to the tag reader at the received frequency. The Tuttle patent does not disclose that the enclosed transceiver 1 or 18 receives a frequency from the interrogator and transmits data back to the interrogator using that received frequency. The Examiner points nebulously to portions of the Tuttle patent which disclose that the enclosed transceiver 1 or 18 receives a signal from the interrogator and transmits data to the interrogator. However, these portions do not disclose that a frequency received from the interrogator is used by the enclosed transceiver 1 or 18 to transmit data.

Second, independent claim 37 recites that the receiver is duty cycled. The Tuttle patent does not

disclose this feature. Instead, the Tuttle patent discloses that the wake-up circuit 12 receives a wake up call from the interrogator in order to wake up the integrated circuit 11. In order for the wake-up circuit 12 to receive this wake up call from the interrogator, the wake-up circuit 12 must inherently be part of the receiver of the enclosed transceiver 1 or 18; otherwise, the wake call from the interrogator would not be able to be received and to wake up the integrated circuit 11. Therefore, the receiver disclosed in the Tuttle patent (which includes the wake-up circuit 11) is not duty cycled or, otherwise, it could not receive the wake up call from the interrogator.

According, for both of these reasons, the Tuttle patent does not anticipate independent claim 37

Independent claim 44 is directed to an RFID tag comprising a transmitter, a receiver, a battery, a switch, and a controller. The transmitter is arranged to transmit first data to a tag reader. The receiver is arranged to receive second data from the tag reader. The switch couples the battery to the receiver. The controller is arranged to operate the switch in an internally initiated duty cycle such that power is provided by the battery to the receiver during ON times

of the duty cycle and such that power from the battery to the receiver is interrupted during OFF times of the duty cycle.

The Tuttle patent discloses that the wake-up circuit 12 detects a wake up call transmitted by the interrogator and responds to the wake up call by waking up the integrated circuit 11 to enable the receiver 13 to receive data from the interrogator. However, even if it is assumed that this operation is duty cycling, this operation is not internally initiated by the enclosed transceiver 1 or 18. (Applicants do not concede that the wake up operation is duty cycling. Indeed, the Tuttle patent does not use the words "duty cycle" anywhere in its text or drawings.)

According, because the waking of the integrated circuit 11 is not internally initiated by the enclosed transceiver 1 or 18, the Tuttle patent does not anticipate independent claim 44.

Because independent claims 37 and 44 are patentable over the Tuttle patent, dependent claims 38, 39, and 45-49 are likewise patentable over the Tuttle patent.

Dependent claim 38 recites that a hop sequence is received as data during ON times. The Examiner argues

that a receiver that receives a frequency hopping signal receives the hop sequence. Whatever merit this argument may or may not have, it is clear that the receiver of the Tuttle patent does not receive the hop sequence as data.

According, the Tuttle patent does not anticipate dependent claim 38.

New dependent claims 76 and 77 recite that the duty cycle is predetermined. The waking operation discloses in the Tuttle patent does not proceed according to a predetermined duty cycle.

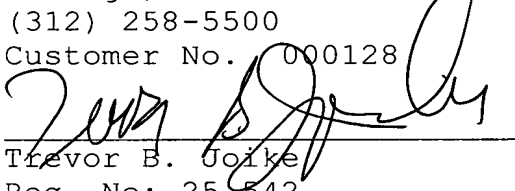
CONCLUSION

In view of the above, it is clear that the claims of the present application are patentable over the references applied by the Examiner. Accordingly, allowance of these claims and issuance of the above captioned patent application are respectfully requested.

Respectfully submitted,

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